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SAFEHUT Solutions building concept created by Mr. David Smith, founder of SAFEHUT LLC,

When people need a durable, reusable shelter that goes up fast, SAFEHUT offers the solution that literally unfolds before their very eyes. The building concept was created by David Smith, founder of SAFEHUT LLC, who envisioned the need for a new generation shelter. SAFEHUT is a composite material made from fiber-reinforced polymers and creates a much superior alternative to trailers, sheds, tents and other inferior structures.

SAFEHUT “Unfolding Solutions” drew upon Smith’s more than 30 years experience in designing lightweight, high-strength composites. He optimized the composite components for the SAFEHUT system by turning to state-of-the-art design, materials and process technologies.

Composites optimized for cost/performance

SAFEHUT’s composite walls, floor and roof panels are manufactured by the resin infusion process, which creates consistent, high-quality parts with extremely low emissions.

A cored laminate and molded-in ribs and beams enhance rigidity and reduce the weight of the panels. The fiber reinforcement is a combination of traditional knitted E-glass and an infusion-specific reinforcing material. The core is a low-density PET (polyethylene terephthalate) foam.

The resin is Altek® R961-IPF-40 from AOC; and the gel coat is Vibrin® G370LV, also supplied by AOC. “The resin properties that are important are low viscosity to enable good flow across large panels, as well as minimal shrinkage during cure,” said Jeff Worden, Chief Operating Officer for SAFEHUT. “In the gel coat, we need a material that sprays smoothly and evenly and has good weather-resistant properties.”

Worden explained the value that AOC service and support brings. “AOC Sales Representative Bob Hoit has been a great asset by working with us to determine the best material choices,” Worden said. “He provides technical help where necessary and works to maintain a good flow of product.”

Performance features and benefits

“The SAFEHUT is designed to last for up to 30 years with proper maintenance,” said Jeff Worden. Wind and load calculations by Vectorworks Naval Engineering, LLC Titusville,

Florida, concluded that SAFEHUT's composite walls are designed to withstand:

- 155 mile (250 kilometer) per hour winds,
- 75 pound per square foot (3.6 kilopascal) snow load to the roof,
- 75 pound per square foot (3.6 kilopascal) live load to the floor, and
- 1.15 G lateral acceleration seismic load.

The collapsible SAFEHUT is easy to transport and set up. Ten (10) units fit into a standard 40-foot (1203.6 centimeter) ISO cargo container. Twelve (12) units can be transported on a 40-foot flatbed semi trailer. "Three people can set up an individual SAFEHUT unit in less than 10 minutes, using a manual small crane system or forklift," Worden pointed out.

Integrated latching systems and rubber seals are secured using only an Allen wrench (hex key) to form air- and water-tight connections. Walls and floors are pre-wired for electricity, and units can be configured to include plumbing features that are connected to water supply and sewer/septic drainage.

A single SAFEHUT unit is 8 feet wide by 20 feet long by 8 feet high (2.4 by 6.1 by 2.4 meters) and weighs about 2,200 pounds (998 kilograms), depending on configuration. Modular design allows for multiple units to be connected in a variety of configurations, including T and H layouts. With versatility in interior configuration as well, the SAFEHUT system is ideal for a broad range of applications. A partial list includes:

- Emergency shelter or command post for fire fighters and disaster relief workers
- Semi-permanent shelter for families displaced by natural disaster or war
- Tactical shelter or medic station for military staff and personnel
- Construction site office or secure storage unit
- Portable ice fishing or hunting cabin
- Kids' playhouse, "man cave," mother-in-law suite, guest quarters

For further information: www.safehut.com. www.aocresin.com